

Claims 1-30 (cancelled).

31. (original): A metal complex compound of formula (1a)



wherein Me is manganese, titanium, iron, cobalt, nickel or copper,

X is a coordinating or bridging radical,

n and m are each independently of the other an integer having a value of from 1 to 8,

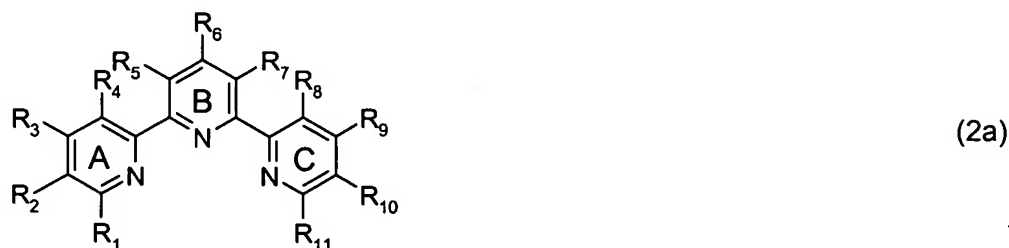
p is an integer having a value from 0 to 32,

z is the charge of the metal complex,

Y is a counter-ion,

q = z/(charge Y), and

L is a ligand of formula (2a)



wherein

R<sub>6</sub> is unsubstituted or substituted C<sub>1</sub>-C<sub>18</sub>alkyl or aryl; cyano; halogen; nitro; -COOR<sub>12</sub> or -SO<sub>3</sub>R<sub>12</sub>

wherein R<sub>12</sub> is in each case hydrogen, a cation or unsubstituted or substituted C<sub>1</sub>-C<sub>18</sub>alkyl or

aryl; -SR<sub>13</sub>, -SO<sub>2</sub>R<sub>13</sub> or -OR<sub>13</sub> wherein R<sub>13</sub> is in each case hydrogen or unsubstituted or

substituted C<sub>1</sub>-C<sub>18</sub>alkyl or aryl; -NR<sub>14</sub>R<sub>15</sub>; -(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>;

-(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>]<sub>2</sub>;

-N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>]<sub>2</sub>; -N(R<sub>13</sub>)-N-R<sub>14</sub>R<sub>15</sub> or

-N(R<sub>13</sub>)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>, wherein R<sub>13</sub> is as defined above and R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub> are each

independently of the other(s) hydrogen or unsubstituted or substituted C<sub>1</sub>-C<sub>18</sub>alkyl or aryl, or R<sub>14</sub>

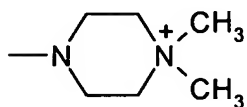
and R<sub>15</sub> together with the nitrogen atom bonding them form an unsubstituted or substituted 5-, 6- or 7-membered ring which may optionally contain further heteroatoms; and

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> are each independently of the others as defined above

for R<sub>6</sub> or are hydrogen or unsubstituted or substituted aryl,

with the proviso that

- (i) at least one of the substituents  $R_1$ - $R_{11}$  contains a quaternized nitrogen atom which is not directly bonded to one of the three pyridine rings A, B or C and that
- (ii) Y is neither  $I^-$  nor  $Cl^-$  in the case that Me is Mn,  $R_1$ - $R_5$  and  $R_7$ - $R_{11}$  are hydrogen and  $R_6$  is



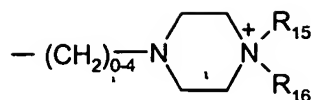
32. (original): A metal complex compound according to claim 31, wherein Me is manganese which is present in oxidation state II, III, IV or V.
33. (original): A metal complex compound according to claim 31, wherein Me is iron which is present in oxidation state II, III or IV.
34. (currently amended): A metal complex compound according to ~~either claim 32 or claim 33,~~ wherein the ligand L is a compound of formula (3)



wherein

$R'_6$  is cyano; halogen; nitro;  $-COOR_{12}$  or  $-SO_3R_{12}$  wherein  $R_{12}$  is in each case hydrogen, a cation,  $C_1$ - $C_{12}$ alkyl, or phenyl unsubstituted or substituted by  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ alkoxy, halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di- $C_1$ - $C_4$ alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, where the amino groups may be quaternized, phenyl, phenoxy or by naphthoxy;  $-SR_{13}$ ,  $-SO_2R_{13}$  or  $-OR_{13}$  wherein  $R_{13}$  is in each case hydrogen,  $C_1$ - $C_{12}$ alkyl, or phenyl unsubstituted or substituted as indicated above;  $-NR_{14}R_{15}$ ;  $-N^{\oplus}R_{14}R_{15}R_{16}$ ;  $-N(R_{13})-(CH_2)_{1-6}NR_{14}R_{15}$ ;  $-N(R_{13})-(CH_2)_{1-6}-N^{\oplus}R_{14}R_{15}R_{16}$ ;  $-N(R_{13})-N-R_{14}R_{15}$  or  $-N(R_{13})-N^{\oplus}R_{14}R_{15}R_{16}$ , wherein  $R_{13}$  is as defined above and  $R_{14}$ ,  $R_{15}$  and  $R_{16}$  are each independently of the other(s) hydrogen, unsubstituted or hydroxyl-substituted  $C_1$ - $C_{12}$ alkyl, or phenyl unsubstituted or substituted as indicated above, or  $R_{14}$  and  $R_{15}$  together with the nitrogen atom bonding them form a pyrrolidine, piperidine, morpholine or azepane ring which is unsubstituted or substituted by at least one unsubstituted  $C_1$ - $C_4$ alkyl and/or substituted  $C_1$ - $C_4$ alkyl, wherein the nitrogen atom can be quaternized;

or a radical



wherein R<sub>15</sub> and R<sub>16</sub> are as defined above and the ring may be substituted; and R'<sub>3</sub> and R'<sub>9</sub> are as defined above or are hydrogen, C<sub>1</sub>-C<sub>12</sub>alkyl, or phenyl unsubstituted or substituted as indicated above.

35-42. (cancelled).

43. (currently amended): A washing, cleaning, disinfecting or bleaching agent, comprising

- I) 0 - 50 % A) of an anionic surfactant and/or B) of a non-ionic surfactant,
- II) 0 - 70 % C) of a builder substance,
- III) 1 - 99 % D) of a peroxide, and
- IV) E) a metal complex compound of formula (1) as described in claim 46 in an amount which, in the liquor, gives a concentration of 0.5 – 50 mg/litre of liquor, ~~preferably 1 – 30 mg/litre of liquor,~~ when from 0.5 to 20 g/litre of the washing, cleaning, disinfecting and bleaching agent are added to the liquor,

the percentages in each case being percentages by weight, based on the total weight of the agent.

44-45. (cancelled).

46. (new): A method of catalyzing an oxidation reaction which comprises oxidizing a substrate in the presence of a catalytically effective amount of a metal complex compound of formula (1)



wherein Me is manganese, titanium, iron, cobalt, nickel or copper,

X is a coordinating or bridging radical,

n and m are each independently of the other an integer having a value of from 1 to 8,

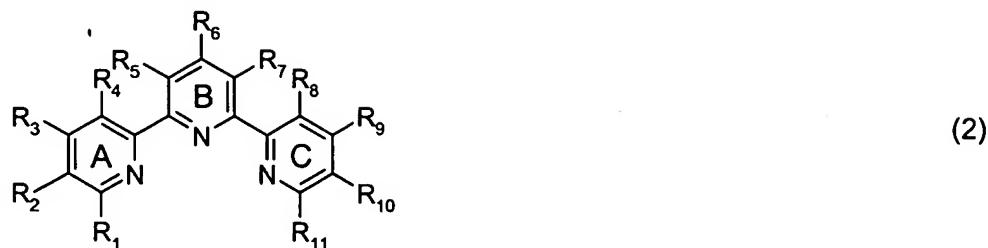
p is an integer having a value of from 0 to 32,

z is the charge of the metal complex,

Y is a counter-ion,

$q = z/(\text{charge } Y)$ , and

L is a ligand of formula (2)

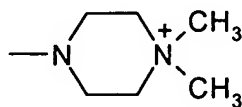


wherein

$R_1, R_2, R_3, R_4, R_5, R_6, R_7, R_8, R_9, R_{10}$  and  $R_{11}$  are each independently of the others hydrogen; unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl; cyano; halogen; nitro;  $-COOR_{12}$  or  $-SO_3R_{12}$  wherein  $R_{12}$  is in each case hydrogen, a cation or unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl;  $-SR_{13}$ ,  $-SO_2R_{13}$  or  $-OR_{13}$  wherein  $R_{13}$  is in each case hydrogen or unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl;  $-NR_{14}R_{15}$ ;  $-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$ ;  $-N^{\oplus}R_{14}R_{15}R_{16}$ ;  $-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$ ;  $-N(R_{13})-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$ ;  $-N[(C_1-C_6\text{alkylene})-NR_{14}R_{15}]_2$ ;  $-N(R_{13})-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$ ;  $-N[(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}]_2$ ;  $-N(R_{13})-N-R_{14}R_{15}$  or  $-N(R_{13})-N^{\oplus}R_{14}R_{15}R_{16}$ , wherein  $R_{13}$  is as defined above and  $R_{14}, R_{15}$  and  $R_{16}$  are each independently of the other(s) hydrogen or unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl, or  $R_{14}$  and  $R_{15}$  together with the nitrogen atom bonding them form an unsubstituted or substituted 5-, 6- or 7-membered ring which may optionally contain further heteroatoms;

with the proviso that

- (i) at least one of the substituents  $R_1$ - $R_{11}$  contains a quaternized nitrogen atom which is not directly bonded to one of the three pyridine rings A, B or C and that
- (ii) Y is neither  $I^-$  nor  $Cl^-$  in the case that Me is Mn(II),  $R_1$ - $R_5$  and  $R_7$ - $R_{11}$  are hydrogen and  $R_6$  is

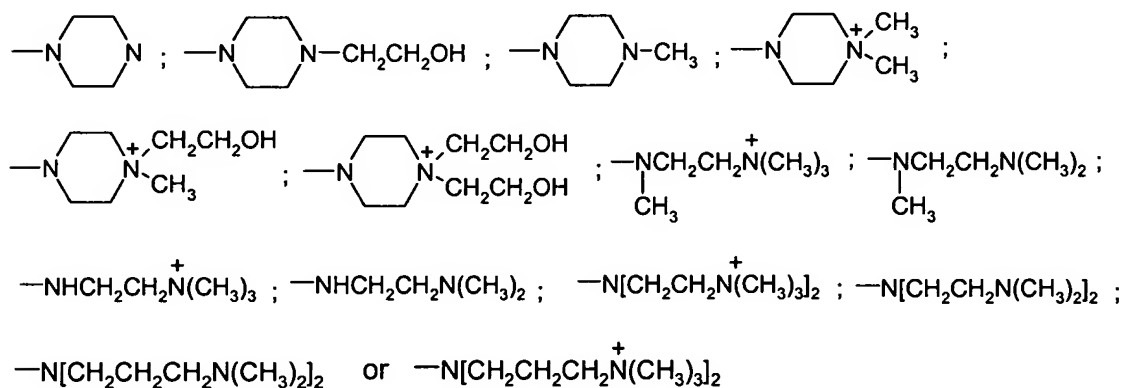


47. (new): A method according to claim 46, wherein Me is manganese which is present in oxidation state II, III, IV or V.

48. (new): A method according to claim 46, wherein Me is iron which is present in oxidation state II, III or IV.
49. (new): A method according to claim 46, wherein X is  $\text{CH}_3\text{CN}$ ,  $\text{H}_2\text{O}$ ,  $\text{F}^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{HOO}^-$ ,  $\text{O}_2^{2-}$ ,  $\text{O}^{2-}$ ,  $\text{R}_{17}\text{COO}^-$ ,  $\text{R}_{17}\text{O}^-$ ,  $\text{LMeO}^-$  or  $\text{LMeOO}^-$  wherein  $\text{R}_{17}$  is hydrogen,  $-\text{SO}_3\text{C}_1\text{-C}_4\text{alkyl}$ , or unsubstituted or substituted  $\text{C}_1\text{-C}_{18}\text{alkyl}$  or aryl, and L and Me are as defined in claim 46.
50. (new): A method according to claim 46, wherein Y is  $\text{R}_{17}\text{COO}^-$ ,  $\text{ClO}_4^-$ ,  $\text{BF}_4^-$ ,  $\text{PF}_6^-$ ,  $\text{R}_{17}\text{SO}_3^-$ ,  $\text{R}_{17}\text{SO}_4^-$ ,  $\text{SO}_4^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{F}^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{I}^-$ , citrate, tartrate or oxalate, wherein  $\text{R}_{17}$  is hydrogen or unsubstituted or substituted  $\text{C}_1\text{-C}_{18}\text{alkyl}$  or aryl.
51. (new): A method according to claim 46, wherein n is an integer having a value of from 1 to 4.
52. (new): A method according to claim 46, wherein m is an integer having a value of 1 or 2.
53. (new): A method according to claim 46, wherein p is an integer having a value of from 0 to 4.
54. (new): A method according to claim 46, wherein z is an integer having a value of from 8- to 8+.
55. (new): A method according to claim 46, wherein aryl is phenyl or naphthyl unsubstituted or substituted by  $\text{C}_1\text{-C}_4\text{alkyl}$ ,  $\text{C}_1\text{-C}_4\text{alkoxy}$ , halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di- $\text{C}_1\text{-C}_4\text{alkylamino}$  unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, phenyl, phenoxy or by naphthoxy.
56. (new): A method according to claim 46, wherein the 5-, 6- or 7-membered ring formed by  $\text{R}_{14}$  and  $\text{R}_{15}$  together with the nitrogen atom bonding them is an unsubstituted or  $\text{C}_1\text{-C}_4\text{alkyl}$ -substituted pyrrolidine, piperidine, piperazine, morpholine or azepane ring, wherein the nitrogen atoms can optionally be quaternized.
57. (new): A method according to claim 46, wherein  $\text{R}_6$  is  $\text{C}_1\text{-C}_{12}\text{alkyl}$ ; phenyl unsubstituted or substituted by  $\text{C}_1\text{-C}_4\text{alkyl}$ ,  $\text{C}_1\text{-C}_4\text{alkoxy}$ , halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di- $\text{C}_1\text{-C}_4\text{alkylamino}$  unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, phenyl, phenoxy or naphthoxy; cyano; halogen; nitro;  $-\text{COOR}_{12}$  or  $-\text{SO}_3\text{R}_{12}$  wherein  $\text{R}_{12}$  is in each case hydrogen, a cation,  $\text{C}_1\text{-C}_{12}\text{alkyl}$ , or phenyl

unsubstituted or substituted as indicated above;  $-\text{SR}_{13}$ ,  $-\text{SO}_2\text{R}_{13}$  or  $-\text{OR}_{13}$  wherein  $\text{R}_{13}$  is in each case hydrogen,  $\text{C}_1\text{-C}_{12}$ alkyl, or phenyl unsubstituted or substituted as indicated above;  $-\text{NR}_{14}\text{R}_{15}$ ;  $-(\text{C}_1\text{-C}_6\text{alkylene})\text{-NR}_{14}\text{R}_{15}$ ;  $-\text{N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$ ;  $-(\text{C}_1\text{-C}_6\text{alkylene})\text{-N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$ ;  $-\text{N}(\text{R}_{13})\text{-(C}_1\text{-C}_6\text{alkylene})\text{-NR}_{14}\text{R}_{15}$ ;  $-\text{N}(\text{R}_{13})\text{-(C}_1\text{-C}_6\text{alkylene})\text{-N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$ ;  $-\text{N}(\text{R}_{13})\text{-N-R}_{14}\text{R}_{15}$  or  $-\text{N}(\text{R}_{13})\text{-N}^{\oplus}\text{R}_{14}\text{R}_{15}\text{R}_{16}$ , wherein  $\text{R}_{13}$  can have one of the above meanings and  $\text{R}_{14}$ ,  $\text{R}_{15}$  and  $\text{R}_{16}$  are each independently of the other(s) hydrogen, unsubstituted or hydroxyl-substituted  $\text{C}_1\text{-C}_{12}$ alkyl, or phenyl unsubstituted or substituted as indicated above, or  $\text{R}_{14}$  and  $\text{R}_{15}$  together with the nitrogen atom bonding them form a pyrrolidine, piperidine, piperazine, morpholine or azepane ring which is unsubstituted or substituted by at least one unsubstituted  $\text{C}_1\text{-C}_4$ alkyl and/or substituted  $\text{C}_1\text{-C}_4$ alkyl, wherein the nitrogen atom can be quaternized, and  $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$ ,  $\text{R}_4$ ,  $\text{R}_5$ ,  $\text{R}_7$ ,  $\text{R}_8$ ,  $\text{R}_9$ ,  $\text{R}_{10}$  and  $\text{R}_{11}$  are as defined in claim 46 or are hydrogen.

58. (new): A method according to claim 57, wherein  $\text{R}_6$  is



and

$\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$ ,  $\text{R}_4$ ,  $\text{R}_5$ ,  $\text{R}_7$ ,  $\text{R}_8$ ,  $\text{R}_9$ ,  $\text{R}_{10}$  and  $\text{R}_{11}$  are as defined above or are hydrogen.

59. (new): A method according to claim 57, wherein the ligand L is a compound of formula

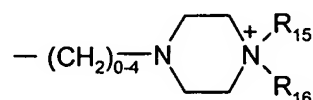


wherein

$\text{R}'_3$ ,  $\text{R}'_6$  and  $\text{R}'_9$  are as defined for  $\text{R}_6$  in claim 57, wherein  $\text{R}'_3$  and  $\text{R}'_9$  can additionally be hydrogen.

60. (new): A method according to claim 59, wherein

R'<sub>3</sub>, R'<sub>6</sub> and R'<sub>9</sub> are each independently of the others phenyl unsubstituted or substituted by C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>alkoxy, halogen, phenyl or hydroxyl; cyano; nitro; -COOR<sub>12</sub> or -SO<sub>3</sub>R<sub>12</sub>, wherein R<sub>12</sub> is in each case hydrogen, a cation, C<sub>1</sub>-C<sub>4</sub>alkyl or phenyl; -SR<sub>13</sub>, -SO<sub>2</sub>R<sub>13</sub> or -OR<sub>13</sub> wherein R<sub>13</sub> is in each case hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl or phenyl, -N(CH<sub>3</sub>)-NH<sub>2</sub> or -NH-NH<sub>2</sub>; amino; N-mono- or N,N-di-C<sub>1</sub>-C<sub>4</sub>alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, wherein the nitrogen atoms which are not bonded to one of the three pyridine rings A, B or C, may be quaternized; N-mono- or N,N-di-C<sub>1</sub>-C<sub>4</sub>alkyl-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>, unsubstituted or substituted by hydroxy in the alkyl moiety, wherein R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub> are each independently of the others hydrogen, unsubstituted or hydroxyl-substituted C<sub>1</sub>-C<sub>12</sub>alkyl, or phenyl unsubstituted or substituted as indicated above, or R<sub>14</sub> and R<sub>15</sub> together with the nitrogen atom bonding them form a pyrrolidine, piperidine, morpholine or azepane ring unsubstituted or substituted by at least one C<sub>1</sub>-C<sub>4</sub>alkyl or by at least one unsubstituted C<sub>1</sub>-C<sub>4</sub>alkyl and/or substituted C<sub>1</sub>-C<sub>4</sub>alkyl wherein the nitrogen atom can be quaternized; N-mono- or N,N-di-C<sub>1</sub>-C<sub>4</sub>alkyl-NR<sub>14</sub>R<sub>15</sub> unsubstituted or substituted by hydroxy in the alkyl moiety, wherein R<sub>14</sub> and R<sub>15</sub> can have the meanings indicated above; or a radical



wherein R<sub>15</sub> and R<sub>16</sub> have the meanings indicated above, and the ring may be substituted, where R'<sub>3</sub> and R'<sub>9</sub> can likewise be hydrogen.

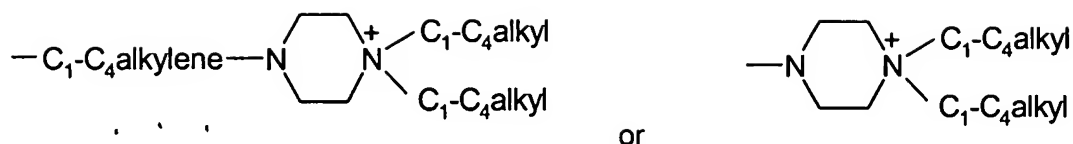
61. (new): A method according to claim 59, wherein R<sub>6</sub> is hydroxy.

62. (new): A method according to claim 46, wherein at least one of the substituents R<sub>1</sub>-R<sub>11</sub> is one of the radicals -(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>]<sub>2</sub>; or -N(R<sub>13</sub>)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>, wherein R<sub>13</sub> is in each case hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl or phenyl and R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub> are each independently of the others hydrogen or substituted or unsubstituted C<sub>1</sub>-C<sub>18</sub>alkyl or aryl, or R<sub>14</sub> and R<sub>15</sub> together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms; or -NR<sub>14</sub>R<sub>15</sub>; -(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>]<sub>2</sub>; or -N(R<sub>13</sub>)-N-R<sub>14</sub>R<sub>15</sub>, wherein R<sub>13</sub> and R<sub>16</sub> are as defined above and R<sub>14</sub> and R<sub>15</sub> together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which is unsubstituted or substituted by at least one

unsubstituted C<sub>1</sub>-C<sub>4</sub>alkyl and/or substituted C<sub>1</sub>-C<sub>4</sub>alkyl and may contain further heteroatoms, wherein at least one nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.

63. (new): A method according to claim 59, wherein at least one of the substituents R'<sub>3</sub>, R'<sub>6</sub> and R'<sub>9</sub> is one of the radicals -(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>]<sub>2</sub>; or -N(R<sub>13</sub>)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>, wherein R<sub>13</sub> is in each case hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl or phenyl and R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub> are each independently of the others hydrogen or substituted or unsubstituted C<sub>1</sub>-C<sub>18</sub>alkyl or aryl, or R<sub>14</sub> and R<sub>15</sub> together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms; or -NR<sub>14</sub>R<sub>15</sub>; -(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>]<sub>2</sub>; or -N(R<sub>13</sub>)-N-R<sub>14</sub>R<sub>15</sub>, wherein R<sub>13</sub> and R<sub>16</sub> are as defined above and R<sub>14</sub> and R<sub>15</sub> together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which is unsubstituted or substituted by at least one unsubstituted C<sub>1</sub>-C<sub>4</sub>alkyl and/or substituted C<sub>1</sub>-C<sub>4</sub>alkyl and may contain further heteroatoms, wherein at least one nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.
64. (new): A method according to claim 46, wherein at least one of the substituents R<sub>1</sub>-R<sub>11</sub> is one of the radicals -(C<sub>1</sub>-C<sub>4</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>]<sub>2</sub>; or -N(R<sub>13</sub>)-N<sup>⊕</sup>R<sub>14</sub>R<sub>15</sub>R<sub>16</sub>, wherein R<sub>13</sub> is as defined in claim 46 and R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub> are each independently of the others hydrogen or substituted or unsubstituted C<sub>1</sub>-C<sub>12</sub>alkyl or aryl, or R<sub>14</sub> and R<sub>15</sub> together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which may be unsubstituted or substituted by at least one unsubstituted C<sub>1</sub>-C<sub>4</sub>alkyl and/or substituted C<sub>1</sub>-C<sub>4</sub>alkyl and may contain further heteroatoms; or -NR<sub>14</sub>R<sub>15</sub>; -(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N(R<sub>13</sub>)-(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>; -N[(C<sub>1</sub>-C<sub>6</sub>alkylene)-NR<sub>14</sub>R<sub>15</sub>]<sub>2</sub>; or -N(R<sub>13</sub>)-N-R<sub>14</sub>R<sub>15</sub>, wherein R<sub>13</sub> and R<sub>16</sub> are as defined above and R<sub>14</sub> and R<sub>15</sub> together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms, wherein the nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.
65. (new): A method according to claim 64, wherein at least one of the substituents R<sub>1</sub>-R<sub>11</sub> is one of the radicals





wherein the alkylene group is unbranched or branched and may be substituted, and wherein the alkyl groups are independently unbranched or branched and may be substituted and wherein the piperazine ring may be substituted.

66. (new): A method according to claim 46, wherein a metal complex compound of formula (1) is used in a washing, cleaning, disinfecting or bleaching agent.
67. (new): A method according to claim 66, wherein a metal complex compound of formula (1) is formed *in situ* in the washing, cleaning, disinfecting or bleaching agent.
68. (new): A method according to claim 46, wherein a metal complex compound of formula (1) is used together with a peroxy compound for the bleaching of spots or stains on textile material or for the prevention of the redeposition of migrating dyes in the context of a washing process or for the cleaning of hard surfaces.
69. (new): A method according to claim 46, wherein a metal complex compound of formula (1) is used as a catalyst for reactions with a peroxy compound for bleaching in the context of paper-making.
70. (new): A method according to claim 46, wherein a metal complex compound of formula (1) is used as a catalyst for wastewater treatment.
- 71 (new): A method according to claim 46, wherein a metal complex compound of formula (1) is used as a catalyst for the delignification of cellulose.
72. (new): A method according to claim 46, wherein mixtures of manganese complexes of the formula (1) with iron complexes of the formula (1) are used for preventing the redeposition of migrating dyes and at the same time bleaching of spots or stains on textile material.

73. (new): A method according to claim 74, wherein mixtures of manganese complexes of the formula (1) with iron complexes of the formula (1'), which corresponds to the formula (1) but contains no quaternized nitrogen atoms, are used.